

The Midwife.

Banana Flour as food for Infants.

Dr. Eric Pritchard, Assistant Physician to the Queen's Hospital for Children, speaking in the section of Diseases of Children at the Annual Meeting of the British Medical Association, said, as reported in the *British Medical Journal*:—For many years past I have recommended the addition of mashed banana to the milk mixtures of artificially fed infants; for I have found its antiscorbutic properties of value in the maintenance of nutrition. More recently I have been making experiments with banana meal made into a gruel or decoction as a substitute for the more expensive proprietary infant foods. The results so far have proved quite satisfactory. The chief objections to proprietary foods are, first, that they are expensive, and secondly, that they are either employed as substitutes for cow's milk, or added in too large quantities. It is of great importance that infants should be taught early to digest cow's milk; artificial substitutes for cow's milk do not achieve that end, for they are mostly predigested. The digestion of cow's milk is undoubtedly made easier for the infant by the addition of cereal decoctions and solution of gum or gelatine. The recent studies of Alexander and Bullowa on the protective action of colloids in milk have afforded a scientific explanation of the empirical experience that gum, gelatine, or cereal Gruels, added to milk, facilitate the digestion of casein.

It is, however, of importance, if cereal Gruels are employed for this purpose, that they should not be given in excessive quantities before the infant has developed its power of diastatic digestion. Very thin Gruels should be employed at first, and their strength progressively increased; if this precaution is taken the cereal gruel serves the double purpose of promoting the digestion by casein and of developing the infant's power of diastatic digestion. As cereal Gruels I have employed barley water, bread jelly, oatmeal jelly, and barley jelly; all these are excellent in their way, but the time and trouble required to prepare them properly deters many a poor mother from using these particular diluents. A decoction of banana gruel can be made more expeditiously owing to the solubility of the major portion of the carbohydrate elements. A satisfactory gruel can be made in a few minutes by rubbing up a heaped tablespoonful (1 oz.) of banana flour with a pint of water, and then boiling for five minutes.

A gruel made in this way has excellent colloidal properties when added to milk in equal quantity; it thickens the milk, and prevents formation of a leathery coagulum of casein, and satisfies the appetite of hungry infants more effectually than simple milk dilutions. The decoction made in this way has not an attractive appearance, for it is of a light chocolate colour, owing to the presence of a pigment which tenaciously adheres to the starch molecules, and which cannot be bleached by ordinary bleaching reagents. It has been urged against bananas and banana flour that the contained fibre has an injurious influence on the delicate mucous membrane of the infant's intestine. I cannot say that my personal experience supports this view. And I prefer the crude flour to the more highly refined preparations which are sold under fancy names as banana meal freed from all fibre. The whiteness of these preparations and their general character leads me to suspect that they contain very little of the original banana, and a large proportion of ordinary cereal flour.

The nutritive properties of banana flour are high, as is shown by the following figures, which represent those of an analysis made by Professor A. H. Church of a sample of banana meal (Jamaica):—

Water	...	...	15.5 per cent.
Albuminoids	...	...	2.5 "
Starch, sugar, gum, etc	...	...	77.7 "
Oil	...	...	1.0 "
Fibre	...	...	0.7 "
Ash	...	...	2.7 "

Many analyses give a higher value for the albuminoids; this, according to Professor Church, is due to the fact that the whole of the nitrogen present in banana meal does not exist in albuminoid form, but part in the form of amides, and allowance for this has not been made by those who have conducted the analyses.

With the exception of the lower proteid content, banana meal compares favourably as a food with most cereal flours. Although occasionally used in the West Indies as an exclusive food for infants, it is obviously highly unsuited to this purpose, but in the form of a decoction it is an excellent diluent of cow's milk.

In reply to questions as to the age at which starchy foods might safely be given, Dr. Pritchard replied that in small doses they might be begun when the child was a week or two old.

[previous page](#)

[next page](#)